

What is claimed is:

1. An oil pump drive assembly for an automobile engine comprising:
an oil pump;
a drive shaft having a distal input end and an opposite pump end secured to the oil pump for actuating the oil pump in response to rotation of the drive shaft;
a sprocket secured to the distal input end of the drive shaft; and
a gear assembly for transferring a force from the engine comprising a drive gear secured to the drive shaft between the pump and distal ends and a driven gear engaged with the drive gear for rotation of the driven gear in response to rotation of the drive shaft;
the gear assembly positioned at the distal input end of the drive shaft and the oil pump positioned at an opposite pump end of the drive shaft for providing packaging space for the oil pump drive assembly.
2. The oil pump drive assembly of Claim 1 wherein the gear assembly consists of the drive gear and the driven gear.
3. The oil pump drive assembly of Claim 1 including a balance shaft extending axially from the driven gear for rotation with the driven gear in response to rotation of the drive shaft for dampening vibrations associated with the operation of the automobile engine.
4. The oil pump drive assembly of Claim 3 wherein the driven gear has a smaller diameter than the drive gear for providing a different rotation speed for the balance shaft.
5. The oil pump drive assembly of Claim 4 wherein the balance shaft rotates at twice the speed of the drive shaft.
6. The oil pump drive assembly of Claim 1 including a housing having a sprocket side and a pump side.
7. The oil pump drive assembly of Claim 6 wherein the sprocket side includes a first bore for supporting a gear end of the balance shaft.

8. The oil pump drive assembly of Claim 6 wherein the pump side includes a second bore for supporting a distal end of the balance shaft.
9. The oil pump drive assembly of Claim 6 including an oil pump housing attached to the pump side of the housing.
10. The oil pump drive assembly of Claim 9 wherein the oil pump housing includes a third bore for supporting the sprocket end of the drive shaft.
11. The oil pump drive assembly of Claim 9 wherein the oil pump housing includes a fourth bore for supporting the pump end of the drive shaft.
12. The oil pump drive assembly of Claim 1 wherein the oil pump operates at the same rotational speed as the engine for increasing the pump efficiency and durability and to reduce noise of the oil pump.
13. An oil pump drive assembly for an automobile engine comprising:
 - an oil pump;
 - a drive shaft having a distal input end and an opposite pump end secured to the oil pump for actuating the oil pump in response to rotation of the drive shaft;
 - a sprocket secured to the distal input end of the drive shaft; and
 - a gear assembly for transferring a force from the engine comprising a drive gear secured to the drive shaft between the pump and distal ends and a driven gear engaged with the drive gear for rotation of the driven gear in response to rotation of the drive shaft;
 - a balance shaft extending axially from the driven gear for rotation with the driven gear in response to rotation of the drive shaft for dampening vibrations associated with the operation of the automobile engine;

the gear assembly positioned at the distal input end of the drive shaft and the oil pump positioned at an opposite pump end of the drive shaft for providing packaging space for the oil pump drive assembly.

14. An oil pump drive assembly for an automobile engine comprising:

an oil pump;

a drive shaft having a distal input end and an opposite pump end secured to the oil pump for actuating the oil pump in response to rotation of the drive shaft;

a sprocket secured to the distal input end of the drive shaft; and

a gear assembly for transferring a force from the engine comprising a drive gear secured to the drive shaft between the pump and distal ends and a driven gear engaged with the drive gear for rotation of the driven gear in response to rotation of the drive shaft, the driven gear having a smaller diameter than the drive gear;

the gear assembly positioned at the distal input end of the drive shaft and the oil pump positioned at an opposite pump end of the drive shaft for providing packaging space for the oil pump drive assembly.